



PRAVALA (CORAL REEF) IN AYURVEDA

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ABSTRACT

According to all of the Rasashastra texts, Pravalā (Coral) is one of the nine ratnas (precious stones). Pravalā is a great source of natural calcium and other trace elements, which is why it is utilized extensively in ayurvedic medicine. But Pravalā has been extensively used even before the advancements in Rasa Shastra. In some era, it has been exclusively used for aesthetic purposes, in some other, it has been included as crude ingredient along with other herbal ingredients for using internally. The real application of Pravalā as medicine seems to have happened between 9th and 14th century. **Objective:** To critically review the presence and utilization of Pravalā from Vedic period to treatises of Rasa Shastra. Materials and Methods: Present work has been reviewed and compiled the description and utilization of Pravalā in different contexts, the change of mode of usage as and how we read over through the course of history, starting from Samhita Kala (10th Cent BC) to Treatises of Rasa Shastra (9th Cent AD to 14th Cent AD). **Result:** Data from the critical review of different historical era has been compiled to understand the application of Pravalā. **Conclusion:** Although Pravalā was first only appreciated for its aesthetic qualities, as time went on, its potential for therapeutic use was discovered, and by the end of the 14th century, Rasa Shastra Books has provided more information on the many preparations of Pravalā as well as its uses, with its indications in the management of various ailments.

KEYWORDS: Pravalā, Coral, Vidrūma, Natural Calcium, Pravalā Bhasma and Pishti.

INTRODUCTION

Ayurveda is a traditional science that has its roots in the vedic period. So in order to review a drug mentioned in Ayurveda it becomes imperative to probe back the vedas to understand its worth completely. *Pravalā* is one such drug which has been quoted in ancient and recent treatises of Ayurveda. Pravalā is the name given to coral reefs. Corals are the organisms that produce coral reefs. These organisms belong to the Phylum Coelentrata, which contains animals with large central cavity.

Other than Ayurveda, *Pravalā* has its existence in vedic literature also. In those days it was used for ornamental purpose. During *samhita* period it was introduced into the field of medicine. In classics of *Rasa shastra*, *Pravalā* was further detailed and categorized. It was used as sole medicine for cure of many diseases like *amlapitta*, *klaibiyata* etc during this period

Samhitaperiod (10 Cent B.c.)

Charaka Samhita

Acharya Charaka has mentioned both external and internal uses of *Pravalā*.

External use mentioned in *Charaka* are:

1. In the context of *Jwara chikitsa*, *Acharya* has mentioned that the patients' body should be touched with *Pravalā* which are cooled by water of sandalwood to relieve burning sensation associated with fever¹
2. In context of treatment of eye disease, as an ingredient in *Sankhadi Varti*.²

Internal use mentioned in *Charaka* are:

1. As an ingredient of *Muktadya Curna*, in the treatment of *Swasa* and *Hikka*.³
2. As an ingredient in *Indroktā Rasayana*, in *Rasayana adhyaya* context, *Pravalā* has been mentioned as an ingredient.⁴
3. As an individual drug, *Pravalā* should be powdered and used along with *tandulodaka* in case of *kaphaja mootrakrichra*.⁵

Susrutasamhita

Acharya Susruta also has mentioned usage of *Pravalā* externally and internally

External use mentioned in *Susruta* are

1. In context of *Amladyushita* and *Suktaka chikitsa*, *Acharya* has told to prepare *Anjanam* using *sheeta gunadravyas* like *Pravalā*, *mukta*, *sankha* etc. He uses the word '*vidrum*' for *Pravalā* in the sloka.⁶
2. In the context of *Arjuna chikitsa*, *Acharya* has told to prepare *anjanam* using *Pravalā* along with other dravyas. Here also the word *vidrum* has been used.⁷
3. In the context of *Parvanika chikitsa*, *Acharya* has mentioned preparation of *Choornanjanā*, in which *Pravalā* is one of the ingredient. Here *Acharya* has used the word '*Pravalā*' itself in the sloka.⁸
4. In *kriya kalpa adhyaya*, *Pravalā* has been again mentioned as an ingredient in *choornanjanam*.⁹
5. In the same chapter, *Pravalā* has been mentioned as an

ingredient in *Bhadrodaya anjana choorna*. In this context *Acharya* mentions the word 'Sapta ratna' in the sloka. *Nibandha Sangraha* commentary of *Dalhancharya* has elaborated the term and *Pravala* has been included in the *Saptaratna* by him.¹⁰

Internal uses in *Susruta Samhita* are

1. In the treatment of *Pandu*, *Acharya* has asked to consume along with *mukta*, *anjana*, *sankha* etc as leha along with *gomootra*.¹¹

Mourya Dynasty Period (3rd Cent A.d.)

During this period, *ratnas* were elaborately used and traded. The ornamental importance of *Pravala* has been explained in detail in the famous text "*The Kautilyas Arthashastra*" by *Chanakya*.

Pravala in the book *Kautilyas Arthashastra*

1. *Pravala* has been included under *Khanija dravyas* along with *shankha*, *vajra*, *mani*, *mukta* etc. The *Khanyadhyaksha* (superintendent of mines) are given the responsibility to establish factories for these precious materials.¹²
2. The duty to identify and examine the quality of *Pravala* has been entrusted to *Suvarnadhyaksha* (superintendent of gold). He is also supposed to know the amounts of these required for making gold and silver ornaments.¹³
3. In context of duties of *Souvarnika* (goldsmith), it is told that the goldsmith is supposed to know the required standard quality (*jaatiroopa*, *varna*, *pramana*, *pudgal*) of *vajra*, *mani*, *mukta*, *Pravala*.¹⁴
4. The duty of *Shulkadhyaksha* (collector of customs and tolls) must levy tax based on the amount of work, time required, wages given for making of ornaments using *shankha*, *vajra*, *Pravala* along with the material's cost.¹⁵
5. In the context '*koshapravesha ratna pareeksha*', qualities of *Pravala* and place from where it needs to be mined has been told. According to it, coral from *Alakhanda* and *Vivarna* are of superior quality. Also, *Pravala* which are red or of colour of lotus are said to be of excellent qualities. The author also says that *Pravala* that has been eaten by insects and which has a bulge in the middle are of inferior quality.¹⁵

Gupta Dynasty Period (5th Cent)

Brihat Samhita

The author has mentioned *Pravala* among *nava ratna*, and also used to detect sex of foetus using it.¹⁶

Ashtanga Hridaya (5th To 6th Cent A.d)

Vagbhatta has mentioned *Pravala* in 5 different places in the treatise.

Categorization of *Pravala*

1. *Pravala* has been grouped under *kasaya skandha*¹⁷

External uses in *Ashtanga Hridaya* are

1. In context of *Visarpa chikitsa*, its advised to use paste of *Pravala* mixed with ghee.¹⁸
2. In the treatment of *shukram*, its advised to apply *Pravala* as collyrium. The term used here is '*ratnaani*' for which

the *teeka* is '*muktadeeni*'¹⁹

1. Internal uses in *Ashtanga Hridaya* are in the treatment of *Kaphaja Mutrakrichram*, its advised to take powder of *Pravala* along with *Tandulodakam*.²⁰

Chakradutta (11th Cent. A.D)

In *Chakradutta*, *Pravala* has been mentioned in following conditions

1. In *Netra roga chikitsa*, *Pravala* powder is an ingredient in *Srotojadi varti*.²¹
2. In *Netra roga chikitsa*, *Pravala* powder is an ingredient in *Pravaladyanjanam*.²²
3. In the treatment of *Kaphaja Mutrakrichra*, *Pravala Pishti* with *tandulodaka* has been indicated.²³

Sarangadhara Samhita(13th Cent. A.d)

Acharya Sarangadhara has classified *Pravala* in the group of *Ratnas*.²⁴ There is detailing of *Sodhana* and *Marana* procedure of *Pravala* in this context.²⁴

External use of *Pravala* has been mentioned in context of *Putapaka* in *netra rogachikitsa*.²⁵ Here the word *Vidruma* has been used as synonym of *Pravala*.

Bhavaprakasha (16th Cent. A.D)

Acharya Bhavamisra has included *Pravala* as one among the 9 *Maharatnas*.²⁶ He has used the word *Vidruma* as synonym of *Pravala* and says that the former name is masculine while the later name is both neutral and masculine.²⁷ He also says that *Vidruma* must be used to thwart the ill effects of the *graha Marheya* i.e., Mars.²⁸

Bhaishajya Ratnavali (19th Cent. A.D)^{29, 30}

Description of *Pravala* is found along with precious gems i.e, *mani mukta Pravala*. Here *sodhana* as well as *marana* of *Pravala* has been mentioned in detail.

Preparation of a special yoga named *Pravala panchamrita rasa* has been mentioned by *Bhavamisra* in context of *Gulma Chikitsa*. In this preparation, it has been mentioned that *Pravala* should be used in *bhasma* form

Dravyaguna Vijnana (Yadavji Trikamji- 20th Cent. A.D)

In this text *Acharya Yadavji Trikamji* has included *Pravala* along with *Jangama dravyas*. He has elaborately described about appearance and *guna* of *Pravala* with its *grahya swaroopa*.³¹

LITERARY REVIEW OF PRAVALA FROM TREATISES OF RASA SHAstra

1. Rasa Hrudaya Tantra(9th Cent A.D.)

Acharya mentions about *Pravala* at one instance.

In the preparation of *Sarana thaila*, *Acharya* has told to use *Pravala* as *kalka dravya*.³²

2. Rasa Padhati (10th Cent A.D.)

Acharya Bindu of the book has identified *Pravala* under the heading of *ratnas*.³³ The author also indicates *Pravala* as *ratna* for mitigating mangal dosa.³⁴

3. RASARNAVAM (12th Cent A.D.)

In this text, the author has compared lips of *padmini stree* with *Pravala*.³⁵

As the text basically deals with *Dhatu vada*, the uses of *Pravala* in various processes have been mentioned. Therapeutical aspect of *Pravala* are not explained in this text. References of *Pravala* are available in following contexts

- In the manufacturing of *ravi sadrusha varna suvarna* from *sweta suvarna*.³⁶
- For converting *naaga* to *suvarna*, *Pravala* has been mentioned as one of the ingredients for the processing.³⁷
- *Jarana* of *Pravala* using *turasinhini ousadha*.³⁸
- *Draveekarana vidhi* of *Pravala* mentioned along with *vajra*, *abhraka* etc.³⁹

4. Ananda Kandam (12th Cent. A.D.)

In this text *Pravala* has been mentioned in both *Amritikarana vishranti* and *Kriyakarana vishranti*.

In *Amritikarana vishranti* part, *Pravala* is used for *dharana* purpose. Therefore in this context, the properties of *Pravala* which are *prabahavajam* are explained.⁴⁰

In the *Kriyakarana vishranti* part, its usage in *dhatu vada* has been mentioned. It has been included under the heading of *maharatnas* and also its synonyms, *prapti sthana*, *grahya Pravala*, *tyajya Pravala* and *gunas* of *bhasma* and *Pishti* are also mentioned.⁴¹

5. Basavarajeeyam (12th Cent A.D.)

In the 25th chapter of this text, the author has mentioned the synonyms, *sodhana* and *marana* procedure of *Pravala* along with its *bhasmaguna*.⁴²

6. Rasaratnakara (12th -13th Cent A.D.)

The text mentions two methods of preparing *Pravala* artificially.⁴³

7. Rasa Prakasha Sudhakara (12th Cent A.D.)

Very elaborate description of *Grahya Pravala lakshana* and *Tyajyac Pravala lakshana* is available in this book.⁴⁴ *Pravala* has been indicated in diseases like *raktapitta*, *unmada*, *netra roga*, *kshaya* and *visha dosha*. *Pravala* is also seen indicated in reducing effect of *Mangala graha dosha*.⁴⁴ Artificial method of preparing *Pravala* also has been mentioned.⁴⁵

8. Rasendra Chudamani (13th Cent. A.D.)

In this book we can find references about *Pravala* in 3 contexts

- It has been included under the heading of *navaratna* and has been indicated in *Mangala graham dosha*.⁴⁶
- *Shreshta Pravala lakshana*, *tyajya Pravala lakshana* and *Pravala bhasma guna* has been separately mentioned.⁴⁷
- A compound formulation named '*Pravala Rasayana*' has been mentioned in the book with wide range of indication.⁴⁸

9. Rasa Ratna Samuchaya (13th CENT. A.D.)

The author mentions about the synonyms, qualitative assessment of raw *Pravala*, properties of *bhasma*, *sodhana*, *marana* and

Pishti nirmana of *Pravala* elaborately.⁴⁹ *Pravala* has been used as ingredient in many formulations. Such references are available in the context of *Pramehado Vasantakusumakara*⁵⁰ *rasa* in *Mutrakrichrashmaryadi roga chikitsa adhyaya*, *Vajra rasa*⁵¹ in *rajayakshmaruchyadi chikitsa adhyaya* etc. it also is used in *Sree Shankarakta Daivavyapasrayachikitsa*⁵² in *Vandhyagarbhinyadi chikitsa adhyaya*.

10. Rasendra Sara Sangraha⁵³ (14th Cent A.D.)

The author has mentioned about the *sodhana* and *marana* of *Pravala*.

11. Rasendra Chintamani⁵⁴ (14th Cent. A.D.)

Acharya has included *Pravala* in *Ratna* group. He has also mentioned *samanyasodhana*, *vishesha sodhana* and *marana* of *Pravala*. *Acharya* also mentions in the book that there is no need to purify drugs like *Pravala*, *mukta* etc.

12. Ayurveda Prakasa⁵⁵ (17th Cent. A.D.)

The author has very vividly described about the *grahyalakshana*, *agrahyalakshana*, properties of *Pravala* and test to verify the quality of *Pravala*. He has also given a brief note about the habitat of *Pravala*.

13. Yoga Ratnakara

The author has mentioned *Pravala* along with *ratnas*. He has given general and specific *sodhana* procedure for *Pravala*. He also has mentioned *marana* of *ratnadravys* along with their properties in general.⁵⁶ The author has mentioned *Pravala* in following contexts

- In *jwara chikitsa*, the author has mentioned use of *Pravala* as *choorna* along with other drugs for the purpose of *jihwa lepa* in context of *jihwa daha chikitsa* of *sannipata jwara*.⁵⁷ *Pravala* is an ingredient of *Muktapanchamrita rasa*⁵⁸, *Sannipatabhairava rasa*⁵⁸ mentioned in *jwara chikitsa*.
- In *gulma chikitsa*, a formulation named *Pravala panchamruta rasa*⁵⁹ has been mentioned.
- In *Prameha chikitsa*, *Pravala* is an ingredient in *Vasantkusumakara rasa*.⁶⁰
- In the context of *netra roga chikitsa*, *Pravala* has been mentioned as an ingredient in *Krishnadi putapaka*.⁶¹ This is used in the treatment of *Shukla gata roga chikitsa*.

REVIEW OF PRAVALA FROM BOOKS OF CONTEMPORARY ERA

1. Rasa Jala Nidhi⁶² (20th Cent. A.D.)

The author has described about *Pravala* in a detailed manner. According to him, there are 4 types of *Pravala* on the basis of quality. i.e, *Viprajati*, *Kshatriya*, *Vaishya* and *Shudra*. *Grahya agrahtyalakshana* along with *guna* of *Pravala* and its synonyms is also available in the text.

2. Rasa Tarangini (20th Cent. A.D.)

The author has given complete description about *Pravala*, its synonyms⁶³, *grahyalakshana*⁶³, *agrahyaswaroop*⁶⁴, *Pravala guna*⁶⁵, 3 methods of *sodhana*⁶⁵, 4 methods of *marana*⁶⁴, *Pravala bhasma guna andmatra*⁶⁶ and *amayika prayoga*⁶⁶

3. Rasamritam

The author has mentioned *Pravala* as an ingredient in *Chandrakala rasam*.⁶⁷ He has referred to *Pravala* in the context and told that as *mukta* and *Pravala* are animal origin products, it has been detailed by him under *jangamadraya* section of *dravyagunavijnan* book.⁶⁸

4. Rasa Mitram (20th Cent. A.D.)

Description about *Pravala*, its synonyms, place of availability, *gunas*, *sodhana* and *marana* is available in precise form.⁶⁹

5. RASA DARPANA⁷⁰ (20TH Cent. A.D.)

The author, *Bhajandas Swamy*, has described *Pravala* in detail. He has mentioned 3 types of *Pravala* i.e., *Pravala moola*, *Pravala shakha* and *Pravala ratna*. He also has enlisted places where *Pravala* is available today along with its *grahyaswaroopa*, *agrahyaswaroopa*, *sodhana*, *marana*, *Pishtinirmana*, *guna*, *matra*, *vishistayoga*, *anupana* etc.

6. Rasendra Bhaskar⁷¹ (20th Cent. A.D.)

The author has started narration of *Pravala* with explanation of *Pravala utpatti*. He has described about *uttama lakshana* of *Pravala*, *adham Pravala*, its *sodhana* and *marana*, *Pravala bhasma anupana* and *bhasma guna*.

7. Bharateeya Rasa Shastra^{72,73} (20th Cent. A.D.)

The author has mentioned about 4 types of *Pravala* i.e., *Brahmin*, *Kshatriya*, *vaishya* and *shudra Pravala*. Also described about *uttama Pravala lakshana*, *nikrushta Pravala lakshana*, *Pravala* chemical constituents, vernacular names, place of availability, *gunas*, *sodhana*, *marana*, *Pishti* preparation, *matra* of both *Pravala bhasma* and *Pravala Pishti*, *amayika prayoga* and *yogas* of *Pravala*. In the context of *guna* of *Pravala*, the author has quoted reference from *Rasa Ratna Samuchchayam* and *Bhava Prakasha*.

RESULTS AND DISCUSSIONS

By analysing the references available in the treatises, it is evident that *Pravala* was in use from the vedic period itself. During the samhita period, *Pravala* was used externally as well as internally in the form of *Pravala choorna*. It can be inferred from the references that its other forms like *pishti* and *bhasma* preparation were not known in the samhita kala. In all the Brihatrayis it has been indicated in sannipata jwara, swasahikka, kaphaja mootrakrichra, akshirogas etc. Acharya Susrutha indicates *Pravala* in *Pandu*, which is a different context when compared to other books of that era. In the 3rd century, references from the book *Kautilyas arthashastra* reveals that by then the ornamental importance of *Pravala* was known and it was a taxable material during the Chanakya's period. In this book *Pravala* has been mentioned under *khanija dravya* which means knowledge about the *utpatti* of *Pravala* was not there. 2 places, *Aalkanda* and *Vivarna* were quoted to have *Pravala*; these places come around Chinese sea and Persian gulf, where *Corallium rubrum* species are available in abundance even today. Conclusion section should be the brief of your complete research, materials, methods, results and discussions. It should be very brief detail.

From 9th century onwards, *Pravala* references were available in the textbooks of *rasashastra*. In this period, it was used in the form of *bhasma*. But in none of the books therapeutic use of *Pravala* was described in this period. In the 10th cent., use of *Pravala bhasma* in *rasayana chikitsa* can be seen in the text *Rasa Padhati*. In the 12th cent., books like *Basavarajeeyam* and *Rasa Prakasha Sudhakara* were the first to describe *sodhana*, *marana* and medicinal uses of *Pravala*. In the 13th cent., references regarding the artificial preparation of *Pravala* can be seen in the book *Rasa Prakasha Sudhakara*. It can be implied that by then the preciousness of *Pravala* must have increased and procurement of *Pravala* must have been difficult, so it was prepared artificially to meet the increasing demand. Other books in this period like *Rasendra Choodamani*, *Rasa Ratna Samuchchaya* etc have elaborate description about *Pravala*. From this period onwards, *Pravala* has been described in detail in the books of *Rasa shastra*.

CONCLUSION

Pravala is a marine plant that is beneficial to Ayurvedic medicine. Its thorough explanation can be followed from classical literature in antiquity to modern science. Detailed discussions of its identification, pharmaceutical processing, and therapeutic value have been included in classical *Rasashastra* textbooks.

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